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ABSTRACT

An instrument was developed to assess the construct of higher education leadership from discrete innate (possessed) and extrinsic (directed toward others) points of view. Dimensions of the latent construct of higher education leadership were identified, and their content and the relationships between their indicators were "mapped" according to the construct's "nomological net," or a map of the content and relationships of this construct. The Higher Education Leadership Instrument (HELI) was developed from the process of "bootstrapping" the five dimensional theory of higher education leadership (integral, relational, credibility, competence, and direction/guidance dimensions) with a measure. The pilot HELI had three sections: higher education leadership items, demographic information, and open-ended questions about the survey and the instrument. Responses to the HELI were received from 232 academic deans through the World Wide Web. The HELI is meant to be an assessment of the attributes or behaviors leaders consider to be necessary for effective leadership. It may be necessary to revise and restructure the instrument to reflect combinations of the constructs of leadership. This preliminary work appears to have developed a promising version of the assessment. (Contains 66 references.) (SLD)

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Running head: DEVELOPING A HIGHER EDUCATION LEADERSHIP INSTRUMENT

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# DEVELOPING AN INSTRUMENT TO ASSESS HIGHER EDUCATION LEADERSHIP

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# DEVELOPING AN INSTRUMENT TO ASSESS HIGHER EDUCATION LEADERSHIP

## Introduction

There is an irony to higher education. On one hand, it is big business--$280 billion in 2000-2001, 15 million students, 1.8 million employees. It has made tremendous progress in shifting from an industrial to technological base, it fills a demanding workplace with bright and better trained students, and it continues to hold its stead as the key to economic prosperity and social mobility. On the other hand, it is regarded as "ill-suited" and "ill-adapted" to the very technology, skills and knowledge that it purports to advance. Among the reasons is the failure of its leadership--leaders are criticized for not knowing how to lead (Bensimon, Neumann & Birnbaum, 1989; O'Brien, 1998; Rhodes, 2001; U.S. Census, 2002).

The development of leaders of institutions of higher education (IHEs) has been a source of concern in view of the fact that so many come to their positions with less than adequate preparation (McDade, 1987). Because administrators are either "brought up" from the faculty ranks or "brought in" from disciplines outside the academy (business, law, ministry), their preparation has come in the form of on-the-job training or post-appointment professional development programs (Allen & Cherrey, 2000; McDade, 1987).

Originating discipline notwithstanding, leadership is the common thread in higher education administration, so it is important to ensure that developmental programs target leadership for that specific context. Unfortunately, leadership is often treated as a general topic across disciplines rather than being developed for the institution in which it is practiced (Bass, 1990). Traditional leadership assessment instruments, then, overlook the specific context of higher education, providing little systematic knowledge for higher education administrators about behaviors, leadership styles, and effectiveness in IHEs (McDade, 1994; Williams, 2001).

Indeed, no instruments exist that specifically assess higher education leadership.

This paper describes the development of an instrument to assess the construct of higher education leadership, reports the outcomes of that study, and relates some of its findings to the professional development of higher education's leaders (Montez, 2002).

## The Higher Education Environment

### Shared Governance

The unique nature of American higher education sets it apart from the rest of the world--the structure of its governance is more horizontal than hierarchical, and the institution's leadership is expanded to include faculty, administrative, regent and, to a lesser degree, students (Bensimon, Neumann & Birnbaum, 1989; Fisher & Koch, 1996). In this environment the "pull and tug between faculty and administrators" effects reform (O'Brien, 1998, p. xiii), and protects the autonomy and academic freedom of its faculty (Vroom, 1983). When it is administered effectively, the "campus governance machinery" invokes the collective intelligence of the campus community to common advantage (Fisher & Koch, 1996, p. 144). When it is not, that tension between factions undermines the very nature of administration in IHEs; conflicts arise and result in unclear institutional goals and a perceived lack of management (Bensimon et al., 1989).

Thus, the organizational work of academic leaders requires dynamic, collaborative, cross-functional teamwork, instead of emphasis on a hierarchy of authority (Williams, 2001). In other words, if only one aspect of authority is developed, then the entire administrative effect will be compromised (Green, 1988). In higher education, leadership must be regarded as the effort of specialized but synergistic factions.

### External Forces

The environment of higher education is also continually affected by forces outside of it that shape its programs and the work of its leaders. Some of these forces are (a) the changing demographics of higher education's students, (b) demands for greater fiscal accountability, (c) a fast-changing technology, and (d) growing competition from in-house or proprietary institutions.

The demographic makeup of students entering higher education reflects growing numbers of women, ethnic minorities and "older" students in search of a more practically based education (Keller, 1983; Murdock & Hoque, 1999). The aging of the populace and the increase in number and proportion of diverse ethnic groups in the U.S. require astute leadership in higher education that is aggressive and active in recruitment, retention, remediation, and fund-raising (Murdock & Hoque, 1999).

Fiscal challenges from federal and state governments abound as colleges and universities face decreased resources and increased expectations of accountability (Keller, 1983). Prisons, human rights commissions, health and welfare programs, and Medicaid all vie with IHEs for precious funding (California Higher Education Policy Center, 1994). The public's concern about the increased cost of tuition thwarts higher education leaders' attempts to either justify such increases or land alternative sources of funding (Keller, 1983). This concern is also echoed in demands that higher education's funding come from those (students, parents, employers) who directly benefit from it ("A Little Learning," 1997). These external pressures are forcing universities to cut costs wherever possible while simultaneously implementing new accountability measures and answering the public skeptics (Marcus, 1997).

The networked work world today seeks stronger ties between educational and practice systems (Curry & Wergin, 1993). Technology, though welcomed and endemic to higher education, is another force that weighs against IHEs. IHEs face the expectation that their

curricula mirror the reality of the world outside it; conflicts arise when the traditional modes of instruction are supplanted by an information technology that provides expanded learning possibilities (Privateer, 1999). The "increased connectivity" (Allen & Cherrey, 2000, p. 1) and integrated networks in higher education today has changed the delivery of education and students are more technologically based than liberally educated (Levine, 2000). The lines drawn by the faculty between skill-based training and theory-based education also often undermine leaders' efforts in the process of instituting new and innovative curricula, and leaders of IHEs must carefully balance the rapid technologic change with the faculty's resistance to it (Wolverton, Gmelch, Montez & Nies, 2001).

Traditional higher education is now competing with different forms of post-secondary job preparation. More than $60 billion are spent on education and training in the workplace; these in-house mini-universities are corporate America's response to its dissatisfaction with the skills and abilities of college graduates (Thompson, 2000). In addition, proprietary (for-profit) schools generally provide short-term occupational training to a high percentage of women, minorities, and low-income students (Goodwin, 1991). Others, such as the University of Phoenix, are accredited and grant degrees (bachelor's, master's, and Ed.D.s). Public officials warn that "knowledge industries" that can deliver information to untrained workers will replace university teaching (Eamon, 1999, p. 200). IHE leaders are stymied as they try to advance the merits of a full-blown education to a population that once could cannot afford it, but which now has viable alternatives.

**Leadership for the Higher Education Environment**

Given the complexity of higher education, an effective leader must align the internal environment and its external forces (internal and external) and emphasize the interdependence

between them. Administrative skills and background knowledge inform the bulk of the requirements for these leaders. Technical skills in budget and finance and computers, as well as knowledge of laws and legal issues affecting higher education, have been identified as areas in which leaders need training (Townsend & Bassoppo-Moyo, 1996). Curricular expertise and interpersonal relations are other areas of administrative knowledge that they must possess (Townsend & Bassoppo-Moyo, 1996).

But technical and administrative skills alone do not make for effective leadership. Attitudes, behaviors, and beliefs form another perspective from which to examine effective leaders (Bogue, 1994; Townsend & Bassoppo-Moyo, 1996). For example, Daughdrill (1988) described passion, vision, stewardship, courage, and an ability to implement different talents at different times as the essential attributes of leaders who can effectively navigate higher education's environment. Leaders are also charged with having to efficiently and effectively resolve the tensions that arise in the process of adapting the learning community and business management techniques (Kauffman, 1990). The challenges and opportunities in the administrative and leadership ranks of colleges and universities create expectations of leaders who can speak not only to curricular offerings but as well to campus climate, civility, behavior, and lack of diversity (Kauffman, 1990).

However, little more exists in the higher education literature that describes appropriate behaviors and attributes of persons for leading in this unique environment. To complement the information from these limited sources, a limited email survey was next conducted to compile a "list of critical behaviors" and attributes of current higher education leaders (Crocker & Algina, 1986). This list emerged along a behavioral dichotomy that described leaders' behaviors (a) demonstrated toward others and (b) those they possessed.

Following the limited survey, the leadership literature was revisited to further explicate the construct of higher education leadership by identifying theoretical bases for these behavioral categories. Several better-known, conventional leadership theories were examined. These included trait (e.g., Galton, 1869), personal-situational (e.g., Blake & Mouton, 1964; Hersey & Blanchard, 1969), perceptual-cognitive (e.g., Green & Mitchell, 1979; Vroom & Yetton, 1974), and the transformational/transactional paradigms (e.g,. Bass, 1990; Burns, 1978; Tichy & Devanna, 1986).

These theories emphasize the attributes and behaviors of individual leaders and presume the strength and will (also couched in terms of "influence" and/or "charisma") of leaders and their effect on followers. While these theories explain the interaction between a leader and a follower, they fail to account for the context in which such relationship occurs (Yukl, 1999). They also presuppose a hierarchy, where power emanates from leader to follower, as a condition precedent to leadership.

Based on a seeming mismatch between the constructs highlighted in these theories and the behaviors described by higher education leaders, the review of leadership literature was expanded to include inclusive/collaborative (or "women's" ways; e.g., Astin & Leland, 1991; Helgesen, 1990, 1995), authentic (e.g., Henderson & Hoy, 1982), and team/group (e.g., Bradford & Cohen, 1998; Katzenbach & Smith, 1993) leadership theories. These theories provide better-fitting frameworks that explain the work of leaders in distributive, shared-governance organizations such as higher education.

Personality theories were also tapped to explain the type and range of behaviors that fall within the higher education leadership framework. These theories include Thurstone's (1934) "Big-5" personality theory and Jung's (1971) psychological type preferences model. The

dichotomous distinctions in attributes and behaviors disclosed by the email survey also paralleled the distinctions made by traditional and behavioral approaches to personality assessment. The gist of the traditional approach suggests that human behavior is motivated by characteristics that individuals "have." Behavioral approaches include what persons "do" in various situations to explain their behavior (Goldfried & Kent, 1972).

Some leadership scholars have employed both traditional and behavioral approaches in explicating the concept of "authenticity" of actions (Etzioni, 1968; Henderson & Hoy, 1982). They define authenticity as congruence or alignment of a leader's acts and beliefs; in effect, "matching the leader's words with the leader's actions" (Henderson & Hoy, 1982, p. 4). This notion of action and beliefs seemed to be reflected in the distinctions noted by higher education leaders who responded to the exploratory email survey between what they do and what they possess.

Given these similarities, it was decided to further examine the construct of higher education leadership from discrete innate (possessed) and extrinsic (directed toward others) points of view. Those behaviors displayed toward or with others (relational and visionary), were called "demonstrated resources." The innate attributes (humanistic and competence beliefs) were termed "core resources."

## Conceptual Framework

The systematic scrutiny of the literature on higher education and leadership and the preliminary email data described the first stage of developing higher education leadership's content domain (Reise, Waller & Comrey, 2000). The following five dimensions emerged and were hypothesized to best define aspects of higher education leadership; they answer the question "What are the descriptors or components of higher education leadership?"

1. Integral: This dimension captures the practices and behaviors that are necessary to enhance the organizational relationships in the administration of a shared governance system. Its indicators are inclusion, interdependence, and shared authority.

2. Relational: This dimension captures the practices and behaviors that evidence the leader's relationships on a personal level with members of the IHE. The indicators of this dimension are mentoring, inspiration, caring/sensitivity, and interpersonal skills.

3. Credibility: This dimension includes values-based behaviors that exemplify leaders' credibility. Its indicators are accountability, clarity of values, and confidence.

4. Competence: This dimension defines the work ethic of leaders. The indicators of this dimension are distributed wisdom, hard work, and balance.

5. Direction/Guidance: This dimension exemplifies leaders' behaviors that direct the course of the IHE and its members as they confront internal and external challenges. Indicators of this dimension describe leaders who are visionary, change agents, and who challenge the status quo.

The dimensions were then compared against five contemporary leadership assessment instruments to determine whether these same dimensions existed in any of them. Instruments that are commonly used in leadership assessment were chosen for this comparison--the Campbell Leadership Index (CLI; Campbell, 1998), the Leadership Practices Inventory (LPI; Kouzes & Posner, 1997), Leadership Skills Inventory (LSI; Anderson, 1999), Multifactor Leadership Questionnaire, Form 5x (MLQ; Bass & Avolio, 1995), The Leadership Profile (TLP; Rosenbach, Sashkin & Harburg, 1996). Criteria for their selection included (a) measurement of leadership attributes, practices, skills; (b) use of a multirater (360-degree) instrument, allowing for self- and others' assessment; (c) prior testing on higher education populations; (d) available psychometric information.

These instruments did not exhibit all of the higher education leadership dimensions derived to this point, justifying the development of a new instrument.

With the content domain of higher education leadership established, ten hypotheses (two

hypotheses per dimension--one for its evinced [demonstrated] aspect, and the other for its innate [possessed] aspect) about the factorability of these dimensions were tested. Furthermore, it was hypothesized that the descriptors, or indicators, of these five dimensions, much like those that emerged in the critical behaviors email study earlier described, could be examined from dichotomous perspectives--behaviors that are evinced ("demonstrated resources") and those that are possessed ("core resources"). This dimensional dichotomy is theorized to explain the authenticity of the higher education leader, answering the question "Does the higher education leader both possess and practice each descriptor of higher education leadership?"

## Methods/Data Sources

### Development of the HELI

Thus, the dimensions of the latent construct of higher education leadership were identified, and their content and the relationships between their indicators were "mapped" according to the construct's "nomological net," or a "map" of the content and relationships of this construct (Cronbach & Meehl, 1955; Smith & Glass, 1987). The Higher Education Leadership Instrument (HELI) was borne of the difficult process of "bootstrapping" the five-dimensional theory of higher education leadership with a measure (Nunnally & Bernstein, 1994).

The next phase involved developing the items that represent these dimensions (Hinkin, 1995; Schwab, 1980). Construction of the HELI items focused on how they (a) were phrased, (b) related to the domain, and (c) pointed the respondent to what was demanded (Nunnally & Bernstein, 1994). Care was taken so that items would be understood in a literal and pragmatic sense; simplicity, familiarity, and unambiguousness were imperative in developing the items for the instrument (Schwarz, 1997).

Initially, the item pool was substantially over-inclusive with items that are representative

of both theoretically guided or empirically verified aspects of the construct; variations of these aspects were also included (Reise et al., 2000). Once the pool was established, each item was evaluated and rated for inclusion in the HELI. A total of 64 items were placed into the first version of the instrument. Each dimension contains three to four measures of each indicator; one-half of the 64 items reflect the core resources of each dimension and the other half reflect its demonstrated resources.

The pilot version of the HELI contained three sections. The first section contained the 64 higher education leadership items. The second group consisted of demographic items (age, gender, position, number of years in position, and institution type). The third section contained open-ended questions to elicit the respondents' comments and opinions about survey content and delivery and their suggestions for improving and refining the instrument.

Where the first two stages of instrument development provide for establishing validity and reliability of the HELI, the third stage involves further construct validation, or "elaborating the nomological net" (Cronbach & Meehl, 1955). This includes tests of criterion-related validity (assessing two groups for differences on the measure), and discriminant and convergent validity (by using, for example, the multitrait-multimethod matrix developed by Campbell & Fiske (1959)). However, given this study's pilot status, only principal components analyses (PCA) to test the theorized five-dimension structure of (a) demonstrated resource variables and (b) core resource variables of the HELI and a regression analysis to examine the relationship between the demonstrated and core resource factors were conducted; subsequent validation studies will follow.

Administration of HELI

Sample. The sample in this study (n=452) comprised deans randomly drawn from six

different types of colleges (agriculture, arts & sciences, business, education, engineering, and nursing) in IHEs assigned Carnegie classifications of Doctoral/Research University--Extensive and --Intensive in the *Higher Education Directory* (2001 ed., Rodenhouse, 2000). The determination was made to sample only deans in this pilot study because they comprised the largest group of higher education administrators in the *Higher Education Directory* from which to draw a random sample and still have sufficient numbers remaining that could be surveyed once the instrument was tested and revised.

Web Survey. The HELI was developed for administration over the World Wide Web. It was anticipated that administration through this medium would yield a higher and faster response rate. Dillman's (2000) survey design principles were observed in constructing the HELI. A server domain was acquired and the website (www.the_heli.com) was established through a third-party internet service provider. Protocols were established for secure access to the website, instantaneous data capture to a downloadable spreadsheet, and automatic prompting for incomplete or unacceptable responses.

## Results

A total of 232 responses were received, for a 51% response rate. The scores were captured in two datasets--32 demonstrated resource items (HELI-D) and 32 core resource items (HELI-C)--for purposes of testing.

Internal consistency of the instrument was high (alpha ranged from .74 to .91). Principal components analyses (PCA) tested the 10 hypotheses related to whether the indicators of the demonstrated and core resources would load on the five respective dimensions. In all PCAs, a general leadership factor emerged that accounted for the lion's share of the test variance, along with one smaller ("integral") factor, and other bipolar, ambiguous factors. While these findings

did not support the 10 research hypotheses, they indicated the instrument tapped the higher education leadership construct.

Regression analysis revealed a strong association between the demonstrated and core behaviors, confirming all five research hypotheses. The high, positive (.722 to .854) correlation coefficients for each dichotomous dimension reflected strong agreement by deans that they align their behaviors with their beliefs; in essence, they "practice what they preach" (Henderson, 1995, 1998; Henderson & Hoy, 1982). The strong associations indicated that the deans believed in what they do in the course of their own leadership, no matter what leadership task or responsibility is given to them. Leaders are developed to behave according to the paradigm that most adequately suits the work environment, but the way these behaviors are demonstrated emanates from each person differently. In the case of the HELI deans, it appears that their behaviors were consistent with their personal beliefs.

Though the results of this pilot study indicate a need to revise many of the HELI items to improve upon the instrument's clarity and definition and/or to redefine the dimensions of the higher education leadership construct, it is clear that the general findings support the notion that higher education leadership, at least from the standpoint of the deans studied herein, does indeed involve facets of the five theorized dimensions. That one general factor emerged in each dataset indicates the higher education leadership construct was tapped. That the second (albeit, smaller) factor derived in each dataset comprised the "integral" dimension confirms the existence of the concepts of inclusion, interdependence, networking, and shared authority in these deans from the perspectives that they practice them and believe in their relevance.

## Discussion

In this study, a systematic approach was taken to identify the attributes and behaviors of

higher education leaders and to translate them, based on relationships to the requirements of higher education administration, into an instrument to assess leadership for higher education. It is not an instrument to test a higher education leader's effectiveness but, rather, to determine what leaders perceive as attributes or behaviors necessary for effective leadership. Continued validation studies with the instrument will provide a bird's-eye view of respondents' "take" on these dimensions. For example, we may see that respondents are unable to distinguish the items in their own minds and will continue to regard some or all of these dimensions as inextricably connected. Credibility and competence may be subsumed in each dimension of higher education leadership and therefore not be considered by respondents as attributes that can stand alone. A leader who is able to guide the direction of the organization in the face of adversity must be perceived as competent by those affected in the organization. Maintaining a working relationship with critical outsiders while keeping the mission of the organization at the forefront is facilitated by the leader's credibility. The general factor that emerged in each of the HELI PCAs may be an indication of the inextricability of components; that is, that they are seen as necessarily working in concert. Therefore, it seems likely that restructuring the dimensions to account for this overlap may occur, once the HELI item content and representativeness test consistently. This restructuring may involve combining and/or relabeling dimensions to reflect the combination of constructs, revisiting the dimensions that describe leaders' behaviors, or defining context-specific behaviors.

But prudence and good practice dictate that other, more diverse methods be employed in explicating the dimensionality of higher education leadership. Items earmarked for revision should be pretested in cognitive interviews to determine whether respondents comprehend them as they were intended (Dillman, 2000). Another informal email study might be employed to ask

more questions about perceptions of leadership from various administrators, and this exercise may help to further delineate the dimensions of higher education leadership. Case studies or focus groups could also be conducted to assess practicing administrators' perceptions of leadership in higher education. Narratives generated therefrom will no doubt provide detailed insight to the relationships that the HELI tried to explicate. An experimental design could be implemented to test differences of groups of administrators on different variables. This addition of richer data will continue to elaborate the construct's nomological net, thereby allowing for further testing and revision of the HELI, and/or redefinition of the construct of higher education leadership.

Though construct validation continues, the information derived thus far points us toward consistent, relevant, and meaningful methods for developing personnel in higher education programs, no matter from what field or discipline they emerged. Some ideas for methods to employ in developing leaders along the HELI dimensions are discussed below.

Tied directly to the "integral" dimension of higher education leadership is the ability to function in an organization that includes diverse authority, perspectives, and disciplines. The work involves balancing the demands and needs of the professoriate, regent, administrative, and student factions. In this regard, leadership development programs may encourage collaborative learning and cooperation and developing a relational approach to learning (Belenky, Clinchy, Goldberger & Tarule, 1986; Murrell & Davis, 1991). Courses that emphasize team building and teamwork will facilitate building connections between IHEs and agencies or communities outside of it (Hodgkinson, 1985; Katzenbach & Smith, 1993). In order to encourage an interactive and interdependent atmosphere in administration, programs might emphasize the beneficial effect of combining different leadership perspectives with different personal

definitions (Kezar, 2002).

From the "relational" dimension of higher education leadership, we see that a leader's interpersonal relationships with others is not just about caring and being able to inspire. It is also about resolving conflict, dealing with difficult people, and mentoring (Townsend & Bassoppo-Moyo, 1996). Leadership development programs should encourage a "mentoring community" that instills responsibility in, and commitment to, one another (Murrell & Davis, 1991). They might also focus on human resource management and personnel administration in both education and other disciplines, to emphasize the distinctions and similarities in communication and business practices and skills. Studies in group dynamics and decision-making no doubt will enhance relationships in practice (Katzenbach & Smith, 1993).

"Credibility," the third dimension of higher education leadership, describes the values-based behaviors of leaders. Ethics courses should target development of a sense of integrity and a strong moral commitment (Murrell & Davis, 1991). Outside of courses, higher education leaders might be counseled to learn self-reflection and awareness of identity (Kezar, 2002).

The dimension of "competence" is the area that appears to have greatest attention in higher education leadership literature. Developing high-level organization skills, and proficiency in budget, finance and technology, are imperative (Murrell & Davis, 1991; Townsend & Bassoppo-Moyo, 1996). Understanding the physical workings of the administration is facilitated by courses in planning, governance, and organizational policy (McDade, 1987). Programs must also encourage understanding leaders' own capacity for personal growth, the life cycle stages in academic and administrative life, and the importance of maintaining balance in their lives (Astin & Leland, 1991; Helgesen, 1995; Murrell & Davis, 1991).

Finally, the "direction/guidance" dimension informs programs on the development of

leaders' abilities to move forward in a climate of conflict and change. Focus may be upon organizational change and contact with external educational and political agencies to encourage leaders' understanding of the greater social context in which higher education exists. Implicit in these programs should be opportunities to engage in critical thinking, problem solving, and tolerance for ambiguity and paradox (Murrell & Davis, 1991). In this way, leaders can better appreciate the multiple interpretations of institutional leadership in order to shape the vision as a collective one.

## Conclusion

The HELI, though still in its developmental stages, provides one means by which continued exploration of higher education leadership may be conducted. But it is only one tool that must be used with many, just as a CT scanner provides one means of diagnosing a medical condition. Like a single image produced in a CT scan, this study represents one slice of the whole picture of higher education leadership. With further study, it is hoped more "slices" will emerge to complete the picture. This, in turn, will provide valuable insight to programs for developing leaders so they will more capably and confidently navigate the leadership quagmire in higher education today.

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